Implementation Team Meeting Notes

April 7, 2005
NOAA Fisheries Offices
Portland, OR

1. Greetings and Introductions.

Today's Implementation Team meeting was chaired by Jim Ruff and facilitated by Donna Silverberg. The following is a summary (not a verbatim transcript) of the topics discussed and decisions made at that meeting. Anyone with questions or comments about these notes should contact Kathy Ceballos at 503/230-5420.

2. Updates.

A. In-Season Management (TMT). Eric Braun said that, at yesterday's meeting, the TMT discussed the fact that the April early-bird water supply forecast showed a 7 MAF volume increase over the March final. The April final forecast will be issued on April 8, after which the spring/summer update to the Water Management Plan will be updated to reflect the new numbers. The TMT discussed the operations underway in support of SOR 2005-3; MOP+1 operations started at noon on April 4 at Ice Harbor to coincide with RSW testing. Lower Granite will begin operating at MOP+1 at midnight on April 11, while Little Goose will got to MOP+1 on April 12, and Lower Monumental will begin MOP operations at midnight on April 13. As per SOR 2005-4, Ice Harbor will begin UPA spill on the evening of April 7; RSW testing will continue, and will not be disrupted. McNary will begin UPA spill on the evening of April 10; at John Day, UPA spill will begin on the evening of April 10. At The Dalles, bays 3-6 will be dogged off at a six-foot gate opening, and bays 1 and 2 will be operated as needed to come as close to spilling 40% of total river flow as possible, most likely on the evening of April 11. Bonneville Dam is ready to begin spill on April 15, but there will be more discussion at TMT as to exactly when the salmon managers want to see that happen, said Braun.

Spring seasonal flow in the Lower Snake is expected to be about 50 Kcfs this year, said Braun; as a result, no spill is planned at the Lower Snake collector projects. Fish collection started at Lower Granite on March 25; collection began at Little Goose and Lower Monumental on April 1. Barge transport is expected to begin on April 8. Finally, said Braun, Dworshak is operating to a local flood control elevation of 1587.5 feet by April 5. In response to a question, Braun said that, as far as he knows, all of

these actions are consistent with the UPA and the 2004 FCRPS BiOp.

B. Water Quality Team (WQT). No WQT report was presented at today's meeting.

C. System Configuration Team (SCT). Bill Hevlin noted that it has been some time since he has updated the IT on the significant work underway in the SCT. These items include:

- Bonneville Dam: second year of corner collector evaluation; PIT-tag detection at the corner collector, which hopefully will be operational by the spring of 2006; preparation of a Configuration and Operation Planning document.
- The Dalles: decision by late spring on a forebay guidance device (whether to prototype a temporary curtain in 2006 or go directly to a permanent curtain for use in 2008); continued progress on the Configuration and Operation Planning document.
- John Day: progress on the Configuration and Operation Planning document
- McNary: initiation of conceptual work on spillway surface passage; evaluation of effectiveness of 12 vs. 24-hour spill.
- Ice Harbor: RSW is installed and preliminary evaluation will be underway soon; this will include both a spring and summer RSW evaluation (RSW operation vs. spill to the gas cap operation); full-flow juvenile PIT detection recently installed.
- Lower Monumental: design is underway on the RSW, with a construction decision looming in December 2005; the spring survival study is still under discussion; the improvements to the fish transport loading facilities have been completed.
- Little Goose: initiation of hydraulic modeling studies for spillway surface passage (RSW); the spillway passage study has been cancelled for this year, and will now assess project survival under a no spill condition
- Lower Granite: the Behavioral Guidance Screen (forebay curtain) evaluation has been cancelled, and will now assess project survival under a no spill condition; there will be a summer RSW evaluation.
- Chief Joseph: flow deflector installation work is underway

At Chief Joseph, we have the money to get several spillway flow deflectors done this year, Hevlin said. And that work will start this fall? Ruff asked. As soon as the contractor is ready to get going, they can get going, Hevlin replied. My recollection is that construction will start sometime this August, said Braun.

How will the summer RSW test be done at Lower Granite? Howard Schaller asked. The USGS will be conducting the study using radio-tagged fish, Hevlin replied; they will be released upstream of the project, with two or three days under one operational treatment, then switching to two or three days under another operational treatment. What's the minimum fish size for implanting a radio tag? Schaller asked – is

radio-tagging of subyearlings logistically feasible? I can't recall the exact minimum size, but with the new micro-tags, it is feasible, Gary Fredricks replied.

Also, said Schaller, with respect to corner collector PIT-tag detection, will installing that equipment affect our ability to operate the corner collector in March, for the Spring Creek Hatchery release? It may – we're working on the coordination for that situation, Kim Fodrea replied. Mainly I wanted to be sure it was on our radar, said Schaller – we have some time to address that potential problem if we start working on it now.

What's the timing of the summer study at Lower Granite? Bob Heinith asked. I believe it will run for three weeks, Hevlin replied, adding that the Lower Monumental spring study is scheduled to run for 25 days. Heinith noted that the tribes are concerned that the necessary RSW research isn't going forward to improve passage, particularly at the Lower Snake projects. We ought to be doing that research, rather than letting concerns about the cost of spill drive the decisions about which research projects go forward. It is setting us back in terms of our schedule to put in RSWs and to explore the aggressive non-breach option. For two years in a row, that has been a problem, Hevlin agreed – we've spent $5 million on the Lower Granite BGS, and this is two springs in a row that we haven't been able to get any information on the efficacy of that device. I believe that information could help inform our decision process at The Dalles, although others disagree, said Hevlin. The bottom line is that we can't move forward as a region until we conduct this research, said Heinith. Fodrea replied that Bonneville is doing its best to implement the spill operations called for in the Updated Proposed Action, even in a low-flow year.

D. TMDL Update. No TMDL update was presented at today's meeting.

3. Decision on Lower Monumental Spill Study Issue Elevated from SCT.

Ruff distributed copies of a memo describing the issue elevated from SCT to IT by Bonneville:

> **Given this year's water supply and the plan to install the RSW in 2007, which option best provides the region with information needed to assure the best placement and safety of the RSW at Lower Monumental?**

The memo included the background on this issue, including the fact that both SRWG and SCT have had several discussions on the 2005 Lower Monumental spill study, and have been unable to reach a consensus recommendation. The main purpose of this study is to gather data on relative survival and tailrace egress success at bays 7 and 8 at Lower Monumental, with the purpose of informing the decision about where to place the RSW. An evaluation last spring showed that survival through bay 7, which has no walls on either side of the tailrace -- was acceptable. No studies have been done to

test the safety of tailrace egress conditions for fish passing through bay 8, which has a training wall on one side of the tailrace, under RSW spill conditions.

The test options currently under consideration include the following:

- **Option 1: pared-down version of the original study utilizing 17 days of spill in May; the operation would mimic future RSW operations through bay 8**.

The pros of this option include:

- It would provide information on survival, passage and egress through bay 8, which have not been studied with the new flow deflector in place and with a reduced volume spill pattern.
- Would provide additional baseline data against which to measure survival after the RSW is in place
- 17 days is the minimum time to have acceptable error bands (+/- 4%) on project- and route-specific survival estimates, a crucial uncertainty identified by NOAA. 25 days would be needed for a +/- 2-3% error band

The cons include:

- Because of the overall poor condition of the system, study data may be confounded by other effects that get assigned to the project, not to the overall conditions.
- Standard bays cannot effectively simulate an RSW; therefore, the operation would not reflect the future RSW operation in terms of forebay hydraulic conditions and attraction to Bay 8
- If low survival is found, it may be primarily due to the low flow conditions
- Requires 17 days of spill during a no-spill year as per the Updated Proposed Action

- **Option 2: no spill; survival studied for those fish passing through the project**.

The pros of this option include:

- Would provide a base case for survival under a no spill operation, which is the operation called for in the Updated Proposed Action

The cons include:

- No information would be obtained this year to inform or assess spillbay 8 (or spillway 7) survival and tailrace survival under lower flow conditions prior to commitment of funding for RSW construction.

- **Option 3: Utilize balloon tags for direct survival information about spillbays 7 and 8. Limit spill to one week of the RSW pattern to radio-tag study of egress travel time. Study non-spill passage routes for an additional 18 days**.

The pros of this option include:

- Shorter spill duration during a low-flow year
- Smaller impact to the run-at-large
- Utilizes a spill pattern that would be anticipated for the RSW

The cons include:

- Balloon-tagged fish are not representative of in-river fish passage behavior and survival through the forebay, dam and tailrace. As such, balloon-tag technology is the wrong "tool" for assessment of project and route-specific survival, or tailrace egress.
- Moves away from studying baseline information.
- One-week study, so less variance in conditions would be studied.

Kim Fodrea explained Bonneville's thinking as to why they had elevated this issue. As most of you are aware, she said, the salmon managers feel that more information is needed to inform the Lower Monumental RSW construction decision. On the other side of the coin, under the UPA, this is supposed to be a no-spill year in the Lower Snake. Bonneville is only inclined to implement a spill study if it is a critical study – something that is really needed. That's what's not clear to us, and that's why we're here today, said Fodrea.

Braun said that, from a Corps perspective, the original study plan was founded on the assumption that this would be a normal water year, with spill at the Lower Snake projects, and that it would be possible to use the study to answer a particular question. That's not the way things are turning out, he said; this is a year in which we wouldn't normally be spilling at the Lower Snake collector projects. The SCT and SRWG have tried to adapt the study to these altered conditions so that it will still yield some useful information, but the question is, what will this study be used for? That isn't entirely clear, which makes determining whether or not this is a critical study somewhat difficult. The Corps' position is that we feel that we have enough information now to proceed with the construction of the RSW at bay 8, Braun said – this study would be helpful, but is not critical, to informing that decision. If we get information to indicate that we need some sort of a spill study to further inform that decision, we would be open to that. But given the water year, we're not prepared to say that the need is enough to force that issue. If the region feels differently, however, the Corps is prepared to proceed with a spill study at Lower Monumental in 2005, Braun said. It would be helpful to clarify the purpose of

the study – what question, exactly, we're trying to answer. In response to a question, Braun said the sunk costs for this test are $1-2 million, depending on how the costs are parceled out between the Lower Monumental and Ice Harbor tests. The question is, what is the best use of those tags, and what questions should we be trying to answer, in terms of the purpose of the study?

The other question is, how important is this information to the decision at hand? Fodrea said – is this a critical need or not? Spill is a critical component of that question, observed one participant. Perhaps it would help us if we first talked about what we know vs. what we don't know about fish passage at the spillway at Lower Monumental, said Ruff.

The group devoted a few minutes of discussion to the memo outlining the issue elevated to the IT, the physical configuration of the dam, and the pros and cons of the various study options under consideration. Hevlin noted that there was a two-week bulk spill test at Lower Monumental last May, through bays 7, 3 and 1, with radio-tagged fish. What we learned was that we got good survival through bay 7 – 97.5% survival, in a low-water year, with a deflector. We didn't spill through bay 8, however. At bay 3, survival was similar, but we didn't get as many fish through that bay, Hevlin said, adding that more than 70% of the fish passed through bay 7. Bay 8 could have similar fish passage with an RSW, couldn't it? Ruff asked. I believe so, Hevlin replied. Survival through bay 1 was significantly lower than survival through bays 3 and 7.

In 1994, there was a PIT-tag study at Lower Monumental, with the fish released from a cannister directly in front of the bays, Hevlin said. In that study, survival averaged 98.4% for fish released into spill bay 8, but bear in mind that there was not a flow deflector in bay 8 at that time. The standard error was about 3%. Survival through bay 7 during the 1994 study was 92.7%. The conclusions from this study are that there is no statistical difference in survival between the groups released into spill bay 7 with a flow deflector and spill bay 8 without a flow deflector, said Hevlin. However, the differences observed between the two conditions warrant further testing, with increased replication, to better define whether the addition of flow deflectors would benefit juvenile salmon passage. The study report's recommendations include the following:

- The spillway evaluation should be repeated in future years to determine whether there is a difference in survival between the two spillbays by increasing the number of replicates, and bypass releases should be made during future years and conditions to evaluate route-specific passage through bypass systems.

We also know that we have survival concerns at other projects with training walls, such as The Dalles, and possibly at Mid-Columbia projects as well, said Ruff. We know that survival through bay 6 at The Dalles, which has a training wall, is lower than survival through other bays. It was noted that bays 7 and 8 at Lower Monumental are right in the middle of the river, and are in the thalweg.

The group discussed the fact that relative survival was higher through bay 8 than it was through bay 7 during the 1994 test; it was reiterated that bay 8 now has a flow deflector which was not present during the 1994 test. Hevlin noted that, during last year's test, when spill was provided through bays 1, 3 and 7, survival and egress down through the tailrace was quite good. However, what is being planned in terms of the RSW operation is quite different. What we don't know is, will fish egress and survive the tailrace under that different spill pattern? What is being proposed, with the RSW installed, is 9 Kcfs spill through bay 8 and 8 Kcfs through bay 7, with a few stops on bay 1 or 2 for training spill. We don't have any information that would tell us whether or not that's a good condition for fish, said Hevlin.

We also don't know what the survival rate is through bay 8 with a deflector, Ruff observed. We know what it was without a deflector, but we don't know what it is now. In order to stay on schedule, does the Corps need to let the Lower Monumental RSW construction schedule by this December? Ruff asked. That's correct, Braun replied.

One thing I don't understand, said Schaller – both BPA and the Corps are concerned about violating the UPA by spilling at Lower Monumental. Of all the projects at which you would spill, you would have the least impact at Lower Monumental Dam, because you're transporting most fish from both Lower Granite and Little Goose already. I would like to see what percentage of fish we're talking about – it's probably very low. It seems to me that, from a biological perspective, the risk is fairly low to the run-at-large to conduct this spill test. If it really is a question of money, rather than risk, the biological risk is pretty low, Schaller said. You're certainly not going to have a lot of in-river migrants at Lower Monumental, Ruff observed. To be clear, though, I don't want to leave you with the impression that cost is not a consideration, said Fodrea.

Last year's study was something of a compromise, said Hevlin – we had two weeks of spill, followed by two weeks of no spill. We had radio-tagged fish coming into the project under those conditions, and we found some very interesting things. Tom Lorz observed that, during the spill operation, there was a 5% forebay mortality hit, but during the no-spill operation, researchers saw 50% mortality. The 2005 test will allow us to see whether that holds up again, said Lorz.

Ron Boyce said that, from Oregon's perspective, he is still unclear as to the basis for both BPA's and the Corps' positions. That's what we're trying to get to, Braun replied – what questions are we trying to answer with this study, and do we need spill at Lower Monumental to answer those questions?

A lengthy discussion ensued. Many of the questions surrounding the 2005 Lower Monumental study were focused on the statistical precision it would be possible to achieve this year. Ultimately, it was decided to form an SCT technical/research workgroup to design a study that would determine how best to arrive at a 3% statistical precision for the survival study targeting the relative survival difference between bays 7

and 8. Another IT workgroup was designated to develop decision criteria for RSW installation at Lower Monumental. It was decided that an IT decision on the Lower Monumental study issue will be deferred pending the recommendations of these subgroups.

It was further decided that, once these two subgroups develop their recommendations, the IT and the SCT will meet in a joint conference call to make a final decision on this issue on April 21.

4. Discussion of Development of a Long Range Work Plan for the Implementation Team.

John Palensky distributed a document titled “Suggested Initial Topics for IT Discussion Regarding Long Term Work Plan Needs,” and went briefly through its contents. He asked the IT members to consider this issue, and to come to the next meeting prepared to discuss it.

5. Next IT Meeting Date.

The next meeting of the Implementation Team was set for Thursday, May 5. Meeting summary prepared by Jeff Kuechle.